

# WE KNOW WHAT WORKS:

## EVIDENCE BASED POLICY AND TOBACCO CONTROL

Promoting a Healthier Wyoming • September 19, 2019



Centers for Disease Control and Prevention

National Center for Chronic Disease Prevention and Health Promotion

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# TOBACCO USE IS THE LEADING CAUSE OF PREVENTABLE DISEASE, DISABILITY, AND DEATH IN THE UNITED STATES



**34M**

An estimated **34.3 million** U.S. adults smoked in 2017.<sup>1</sup>



**480,000**

Cigarette smoking and secondhand smoke exposure kill about **480,000** people in the U.S. each year.<sup>1</sup>



**2 in 5**

About **two in every five children** are exposed to secondhand smoke.<sup>3</sup>



**1 vs. 30**

For every one smoking-related death, **at least 30** people live with a serious smoking-related illness.<sup>2</sup>



**\$300B**

Each year, cigarette smoking costs the US more than **\$300 billion**, including \$170 billion in direct medical costs and \$156 billion in lost productivity.<sup>2,4</sup>

Sources:

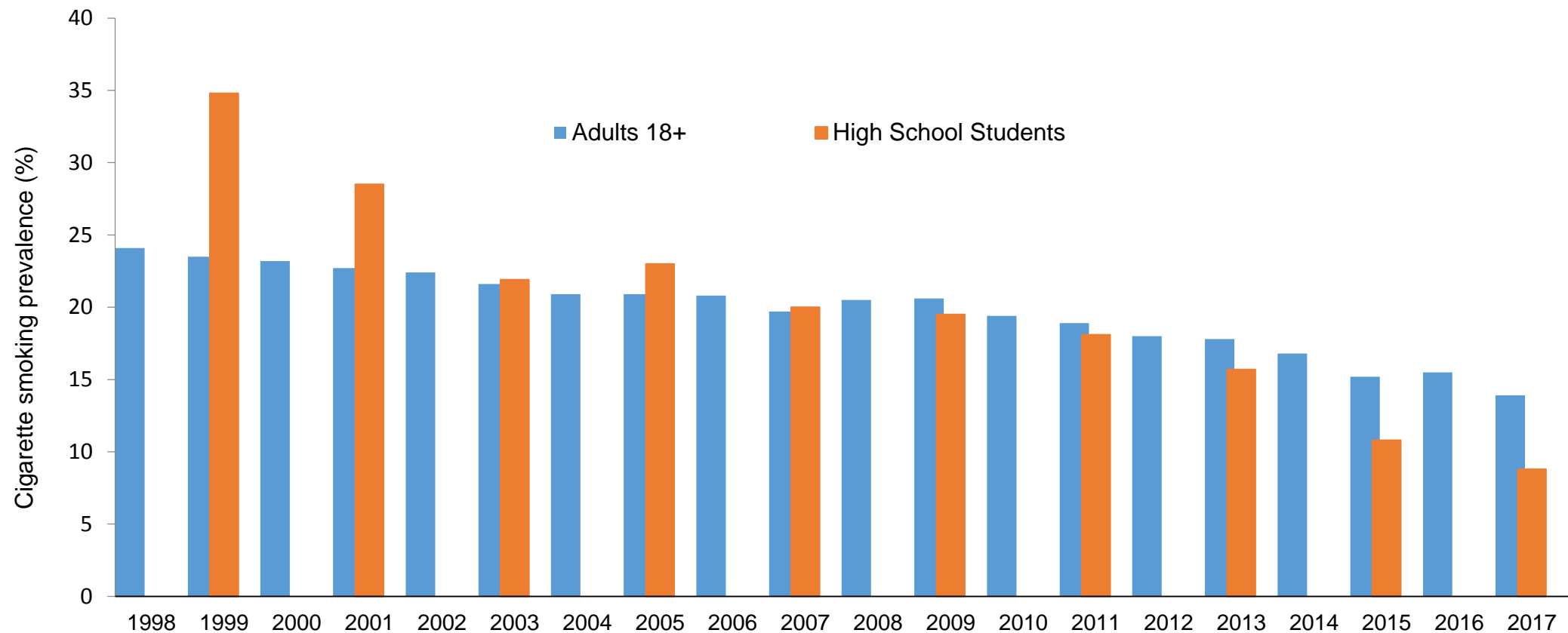
1. Wang TW, Asman K, Gentzke AS, et al. Tobacco Product Use Among Adults — U.S., 2017. MMWR Morb Mortal Wkly Rep 2018;67:1225–1232. DOI: <http://dx.doi.org/10.15585/mmwr.mm6744a2>.

2. U.S. Department of Health and Human Services. The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General. ([https://www.cdc.gov/tobacco/data\\_statistics/sgr/50th-anniversary/index.htm](https://www.cdc.gov/tobacco/data_statistics/sgr/50th-anniversary/index.htm)) Atlanta, 2014.

3. Tsai J, Homa DM, Gentzke AS, et al. Exposure to Secondhand Smoke Among Nonsmokers — U.S., 1988–2014. MMWR Morb Mortal Wkly Rep 2018;67:1342–1346. DOI: <http://dx.doi.org/10.15585/mmwr.mm6748a3>

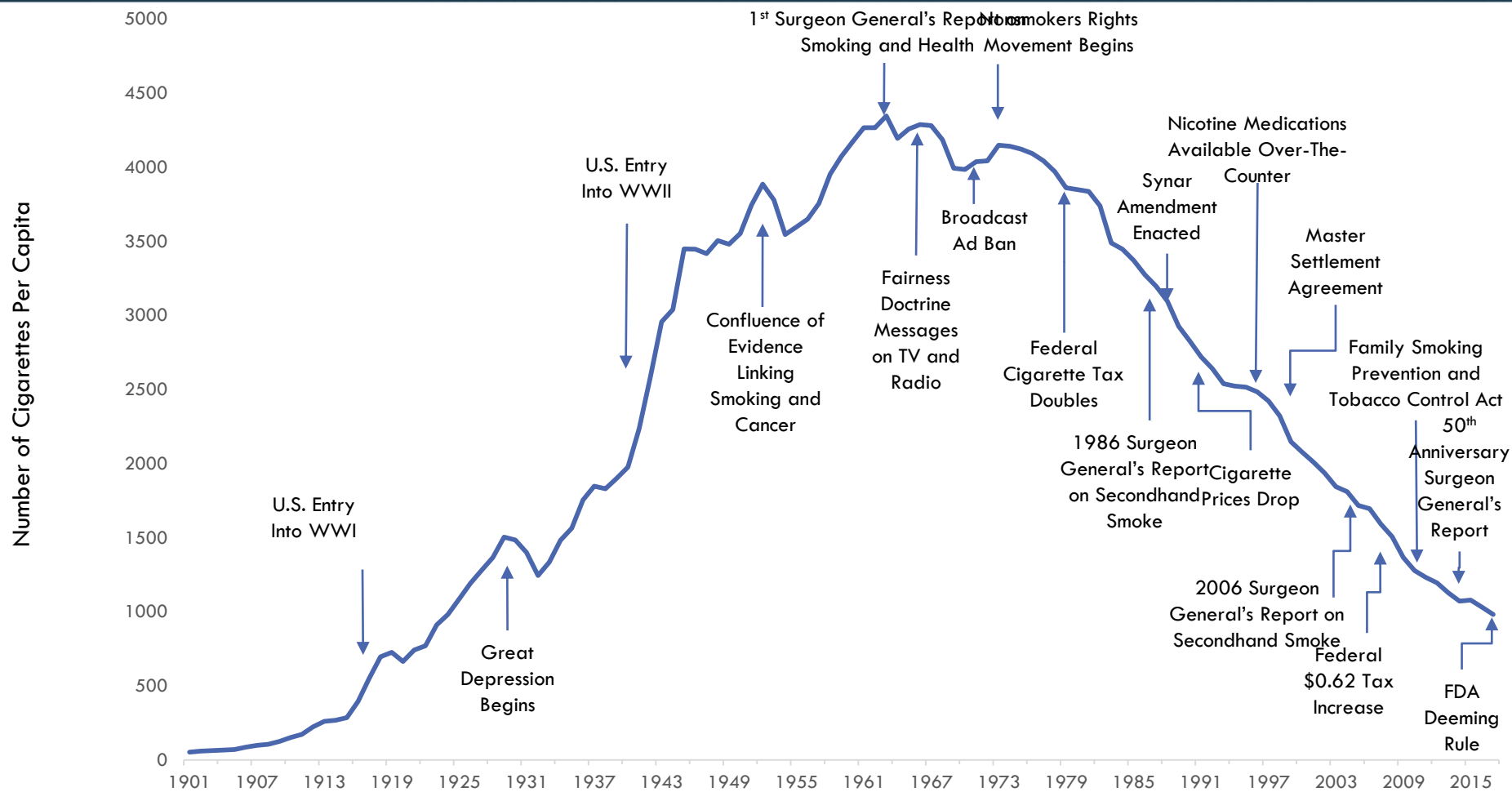
4. Xu X, Bishop EE, Kennedy SM, Simpson SA, Pechacek TF. Annual healthcare spending attributable to cigarette smoking: an update. Am J Prev Med 2015; 48(3):326–33.

# GOOD NEWS: CIGARETTE SMOKING IS DOWN...



**Source:** Adult cigarette smoking prevalence data are from the National Health Interview Survey (NHIS).  
High school cigarette smoking prevalence data are from the National Youth Risk Behavior Survey.

# ADULT PER CAPITA CONSUMPTION AND MAJOR SMOKING-AND-HEALTH EVENTS—U.S., 1900–2017



Sources: Adapted from Warner 1985 with permission; Department of Health & Human Services; Creek et al. 1994; U.S. Department of Agriculture; U.S. Census Bureau; U.S. Department of the Treasury.

# BAD NEWS: DISPARITIES PERSIST



## Race/Ethnicity

**24.0%** American Indians/  
Alaska Natives  
**15.2%** White



## Education Level

**36.8%** GED  
**4.1%** Graduate  
degree



## Annual Household Income

**21.4%** <\$35,000  
**7.6%** ≥\$100,000



## Health Insurance Coverage

**24.7%** Uninsured  
**24.5%** Medicaid  
**10.5%** Private  
**8.7%** Medicare



## Disability/Limitation

**20.7%** Yes  
**13.3%** No



## Sexual Orientation

**20.3%** Lesbian/Gay/Bisexual  
**13.7%** Heterosexual



## Serious Psychological Distress

**35.2%** Yes  
**13.2%** No

# ...AND THE TOBACCO PRODUCT LANDSCAPE CONTINUES TO EVOLVE





# CHANGING THE COST-BENEFIT CALCULUS

Individual



- Tobacco easily accessible
- Smoking in public legal
- Unfettered advertising
- Poor access to cessation help
- Products designed to addict

# CHANGING THE COST-BENEFIT CALCULUS

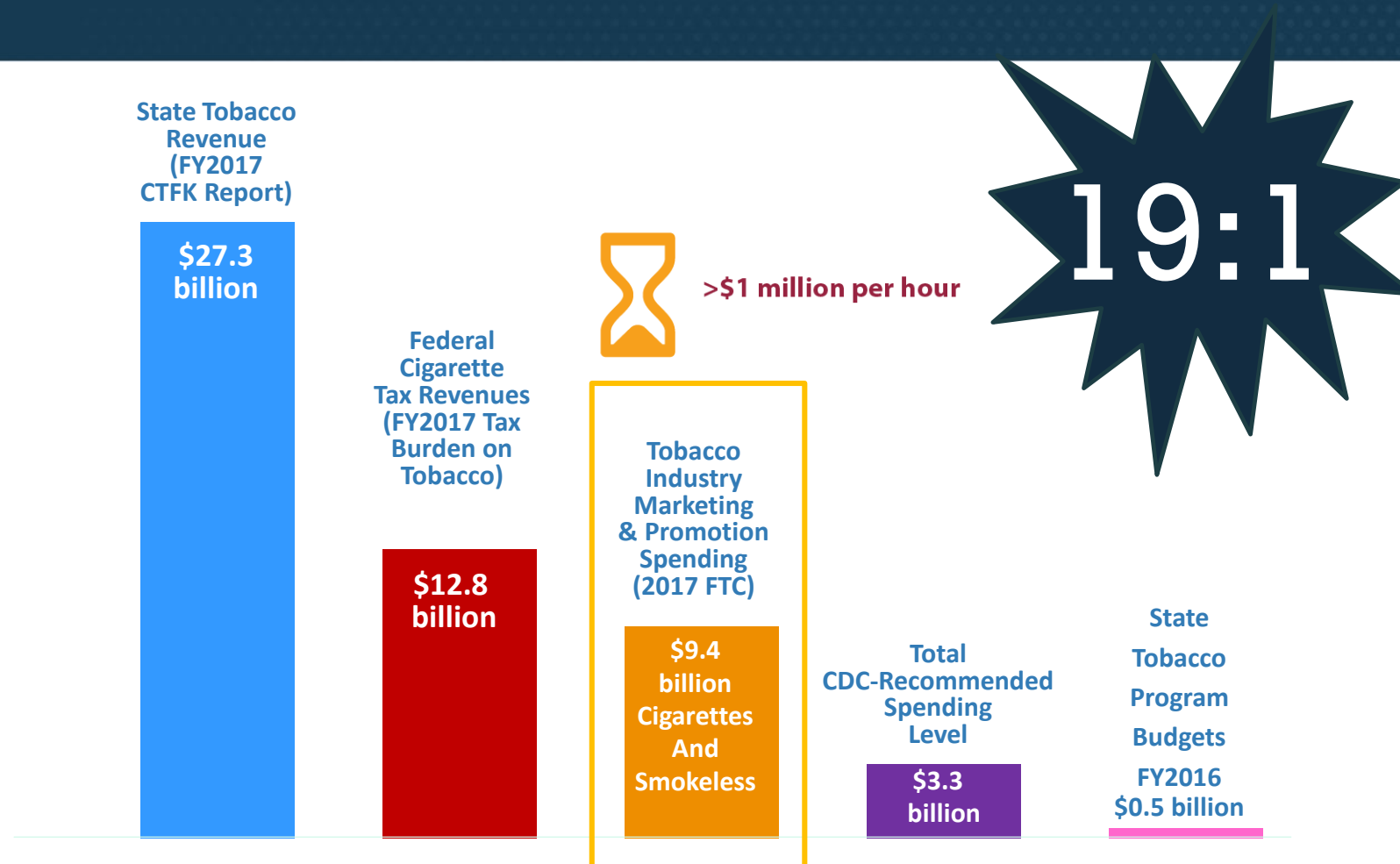
Individual



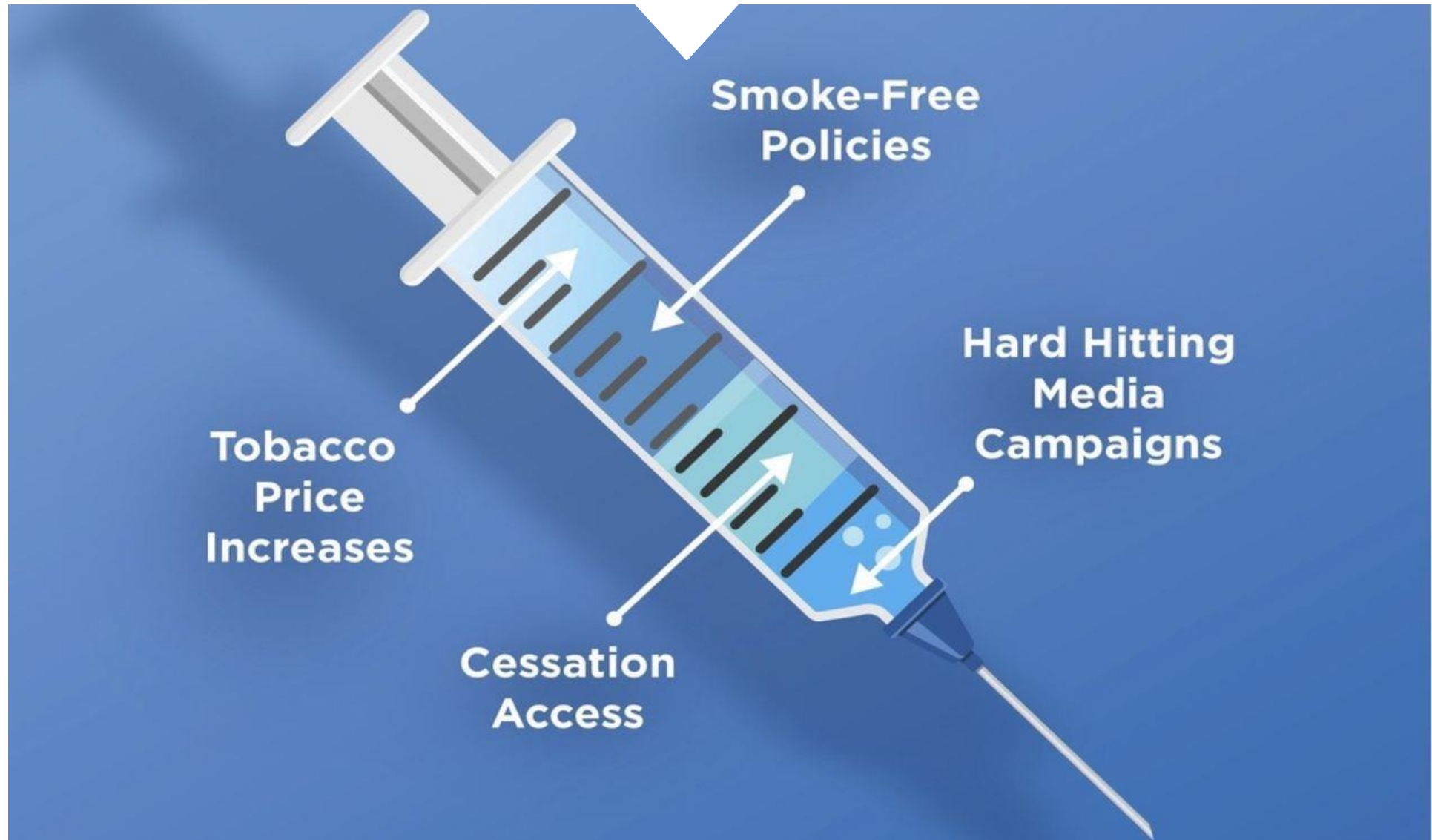
- Tobacco more expensive and less accessible
- Smoke-free policies
- Counter-marketing and promotion restrictions
- Easy access to help
- Products made less addictive



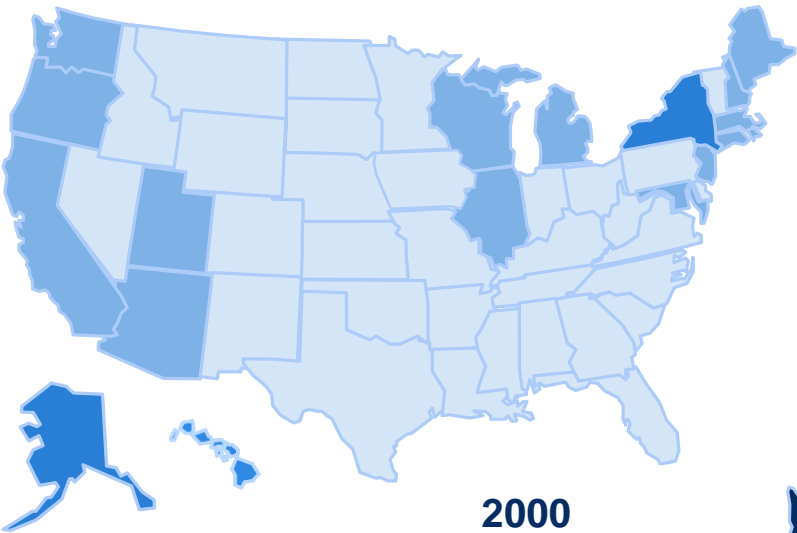
# TOBACCO INDUSTRY IS OUTSPENDING PREVENTION EFFORTS 19:1



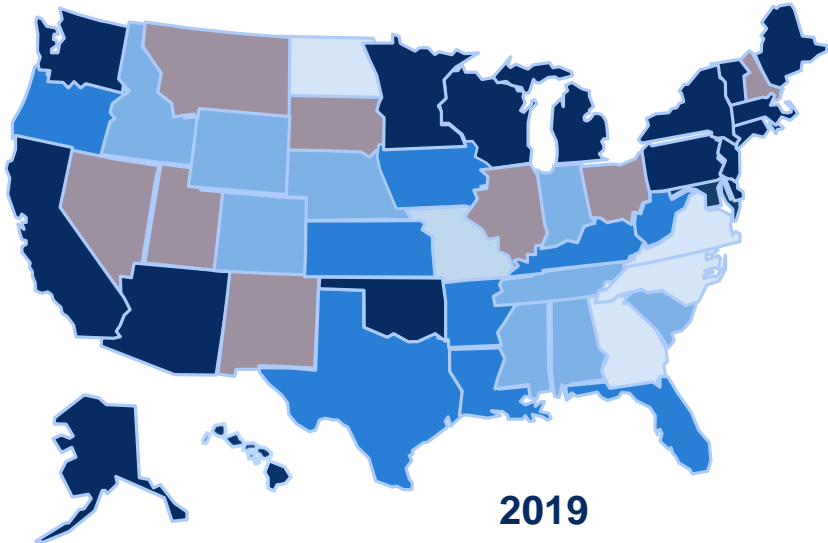
# WE KNOW WHAT WORKS



# CIGARETTE EXCISE TAXES UNITED STATES 2000 – JUNE 2019



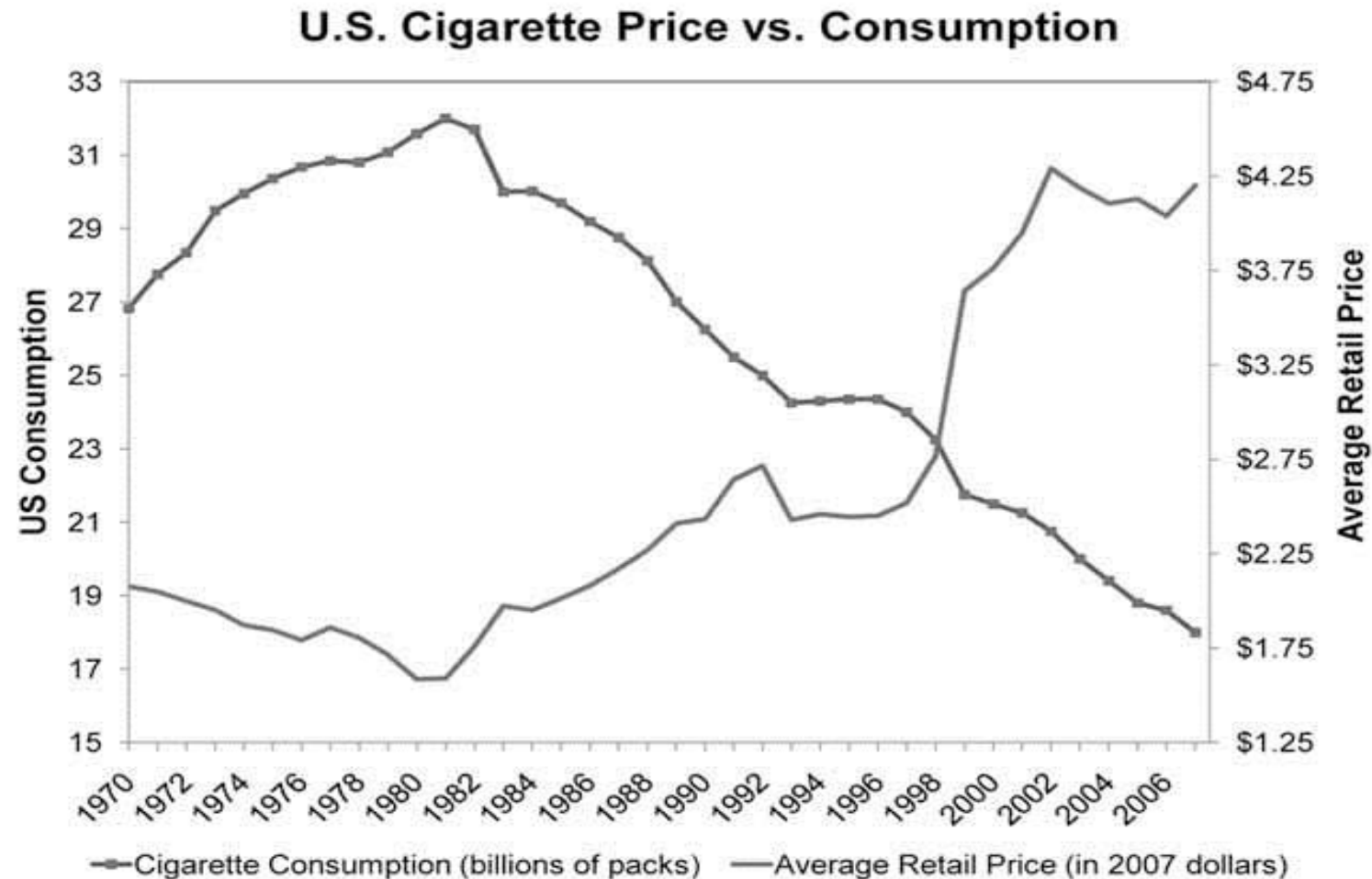
2000



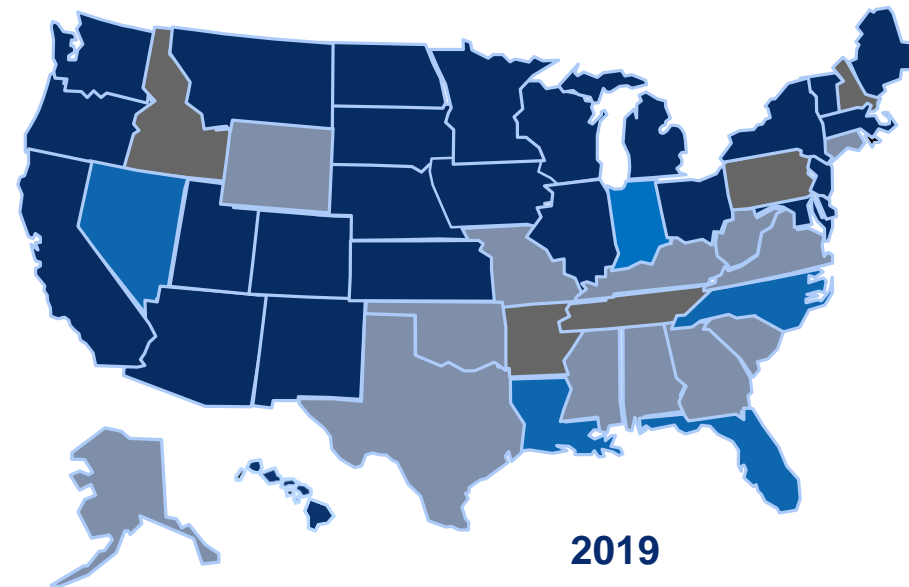
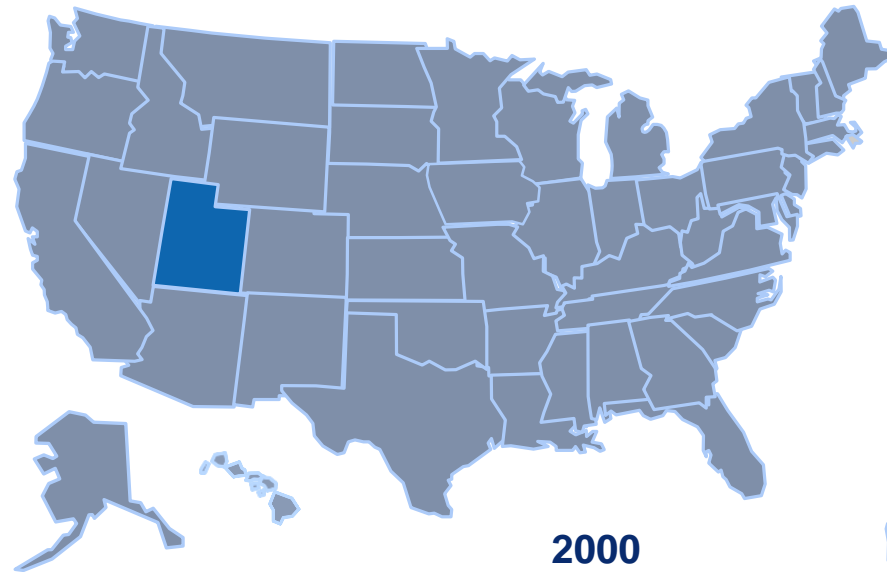
2019



# INCREASING TOBACCO PRODUCT PRICE IS THE SINGLE MOST EFFECTIVE METHOD TO REDUCE CONSUMPTION



# COMPREHENSIVE SMOKE-FREE LAWS UNITED STATES 2000 – JUNE 2019



## DISPARITIES IN SECONDHAND SMOKE EXPOSURE



**SHS Exposure**



**Children**



**African Americans**

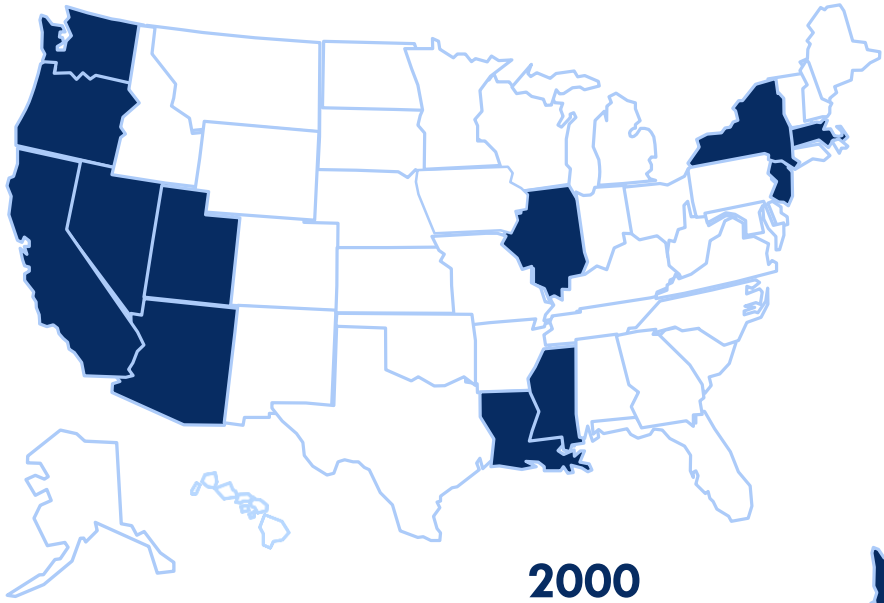


**Persons in Poverty**

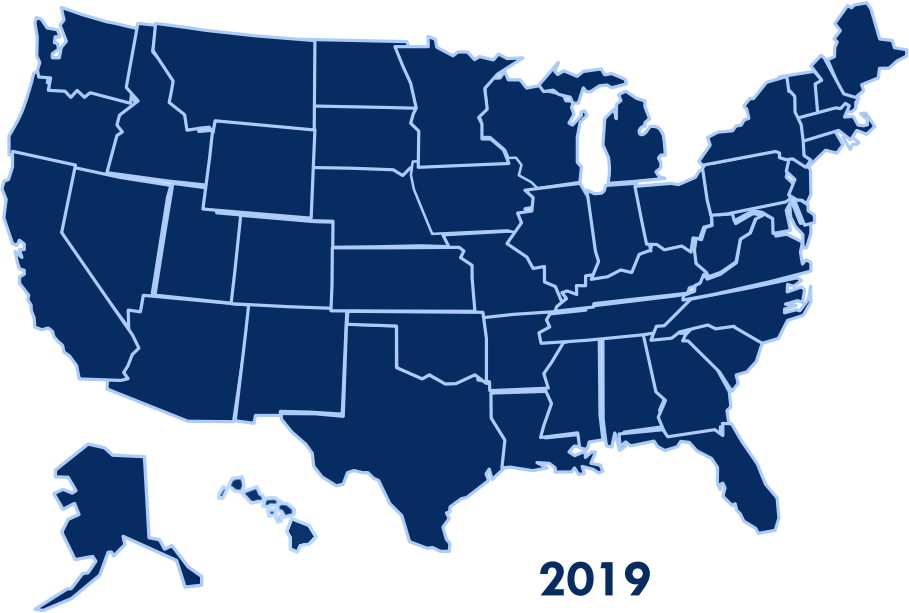


**Renters**

TOBACCO QUITLINES  
UNITED STATES  
2000 and 2019



-  No State Tobacco Quitline
-  State Tobacco Quitline





# WE KNOW WHAT WORKS FOR CESSATION

## Evidence-based interventions that increase quit rates:

Advice to quit from a health care professional



Counseling: individual, group, telephone



7 FDA-approved medications



Barrier-free insurance coverage of these treatments



Health systems changes to integrate treatment into routine care

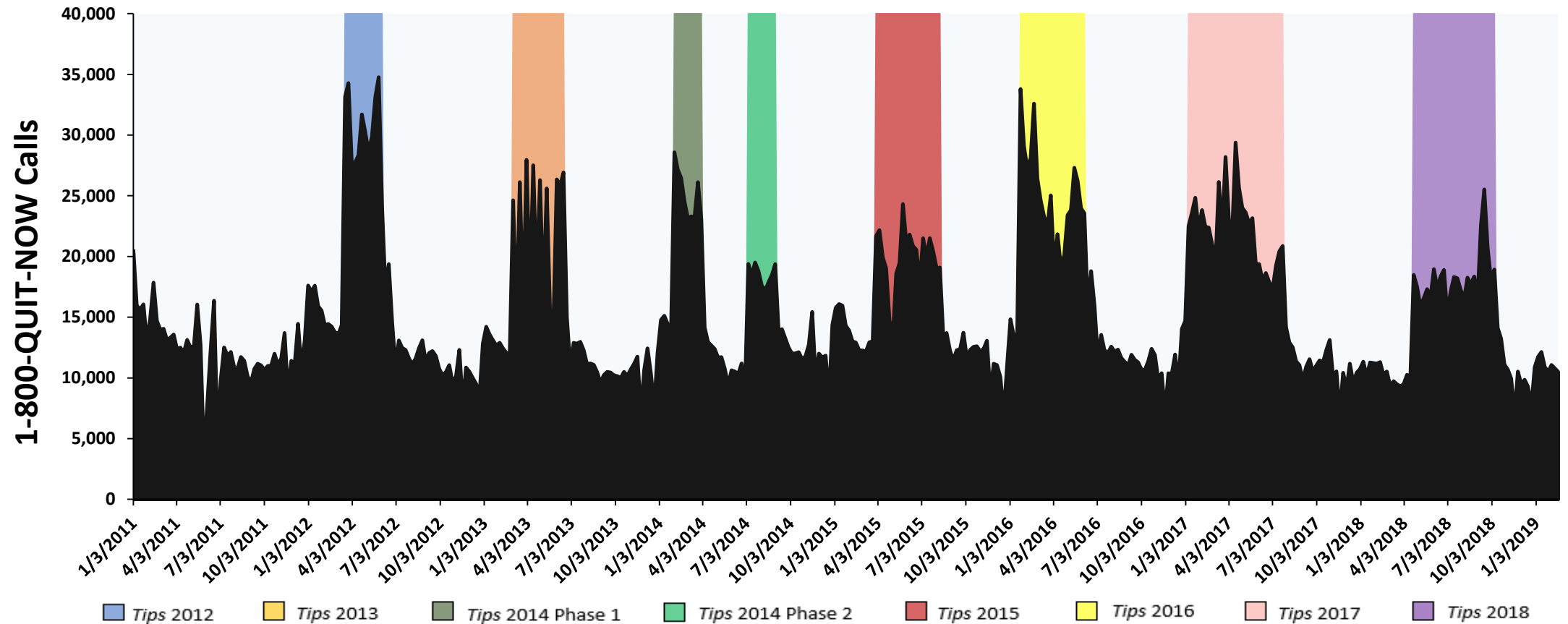


# MASS MEDIA CAMPAIGNS

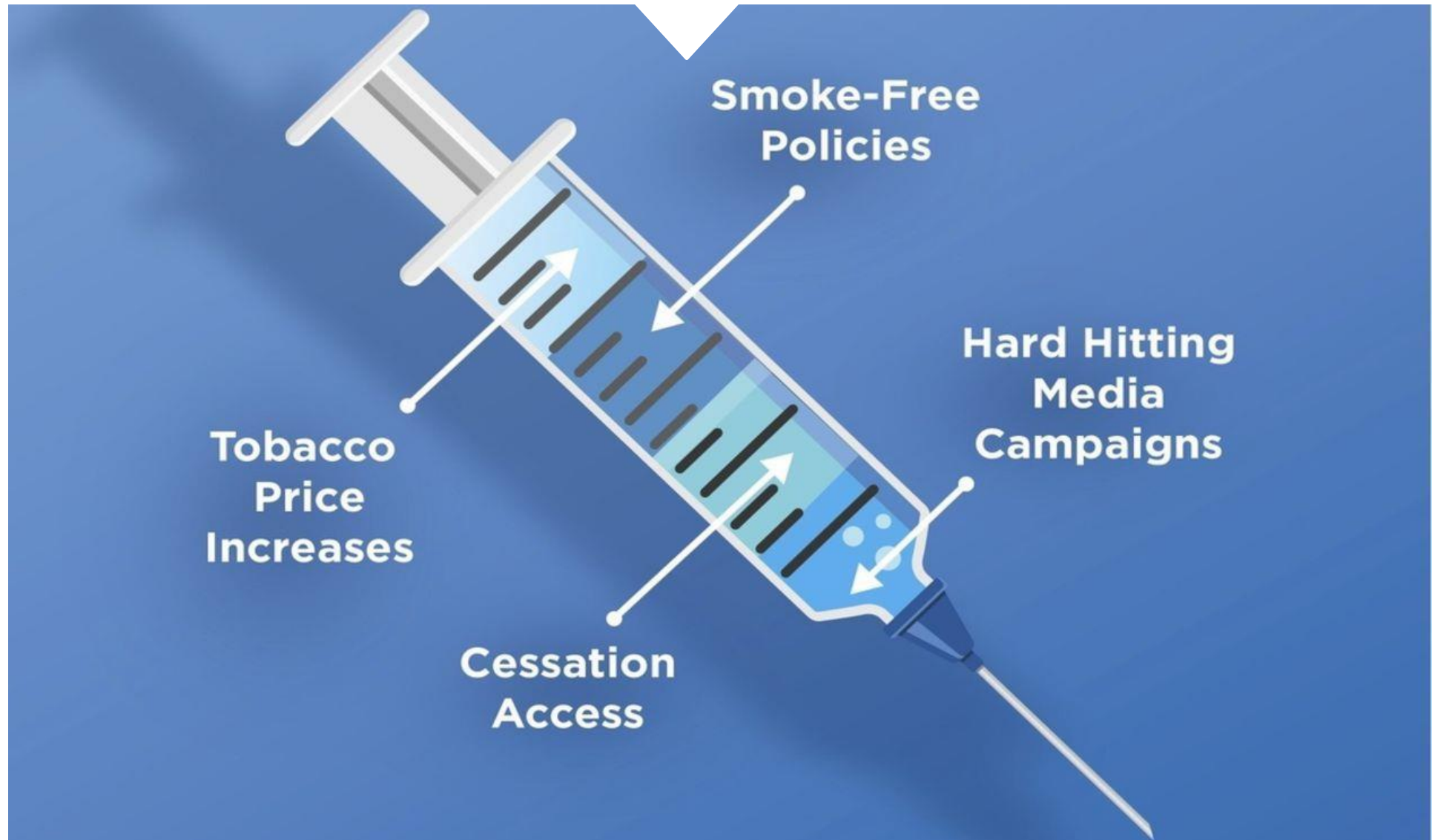


CDC's *Tips* drives quits: 9M quit attempts and 500,000+ sustained quits among U.S. adults (2012–2015)

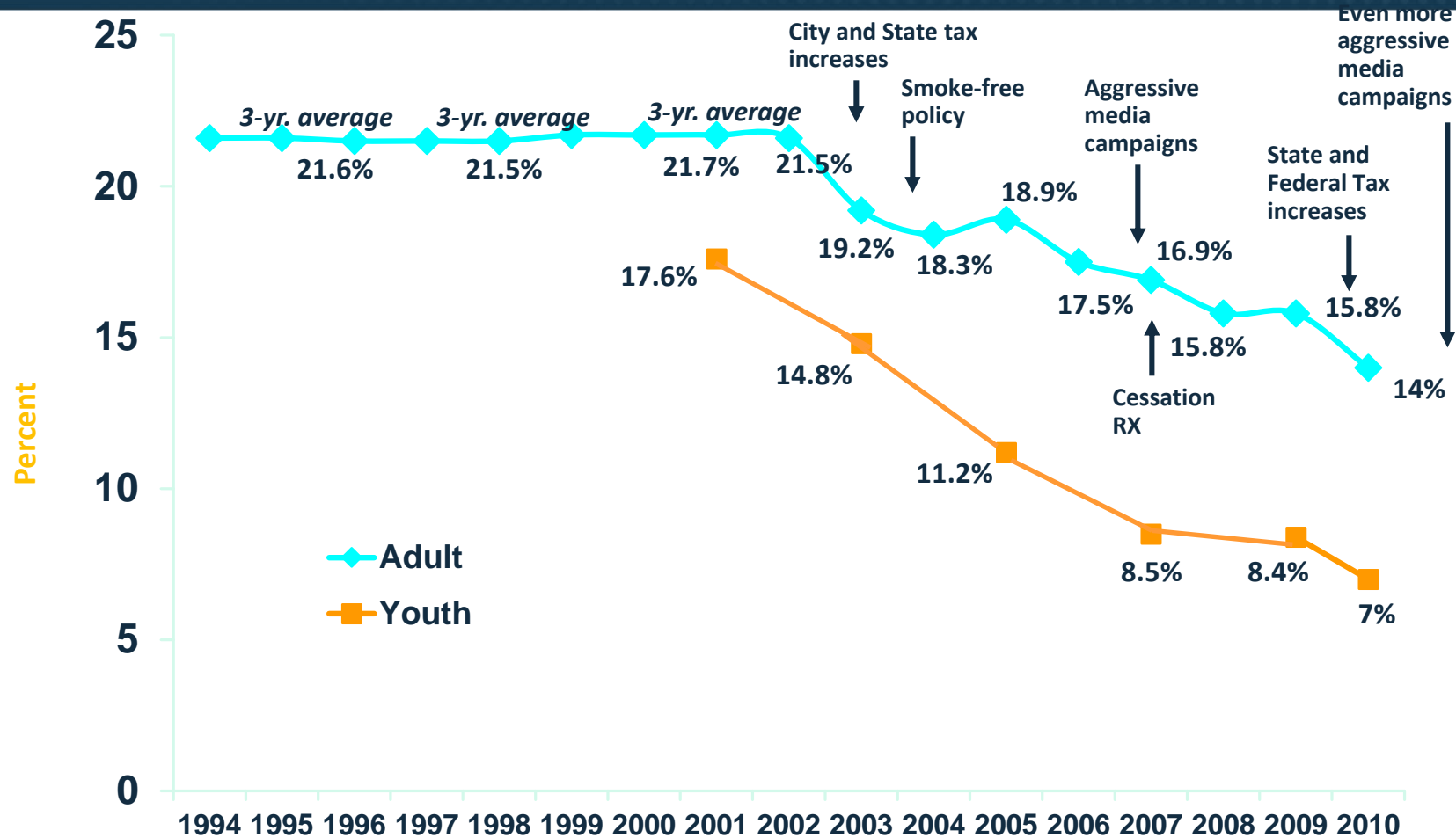
# TIPS DRIVES CALLS: CAMPAIGN RESULTS 2012-2019



## WE KNOW WHAT WORKS



# IMMEDIATE IMPACT OF POLICY CHANGE: NEW YORK CITY







# TOBACCO CONTROL VACCINE BOOSTER: Opportunities to Expand Reach



**Tobacco 21**



**Smoke-free  
Multiunit  
Housing**



**Tobacco-free  
College**



**E-cigarettes &  
Policy**



**Tobacco-free  
Pharmacies**



**e-Referrals**



**Tobacco-free  
Sports**



**Movies/  
Digital Media**

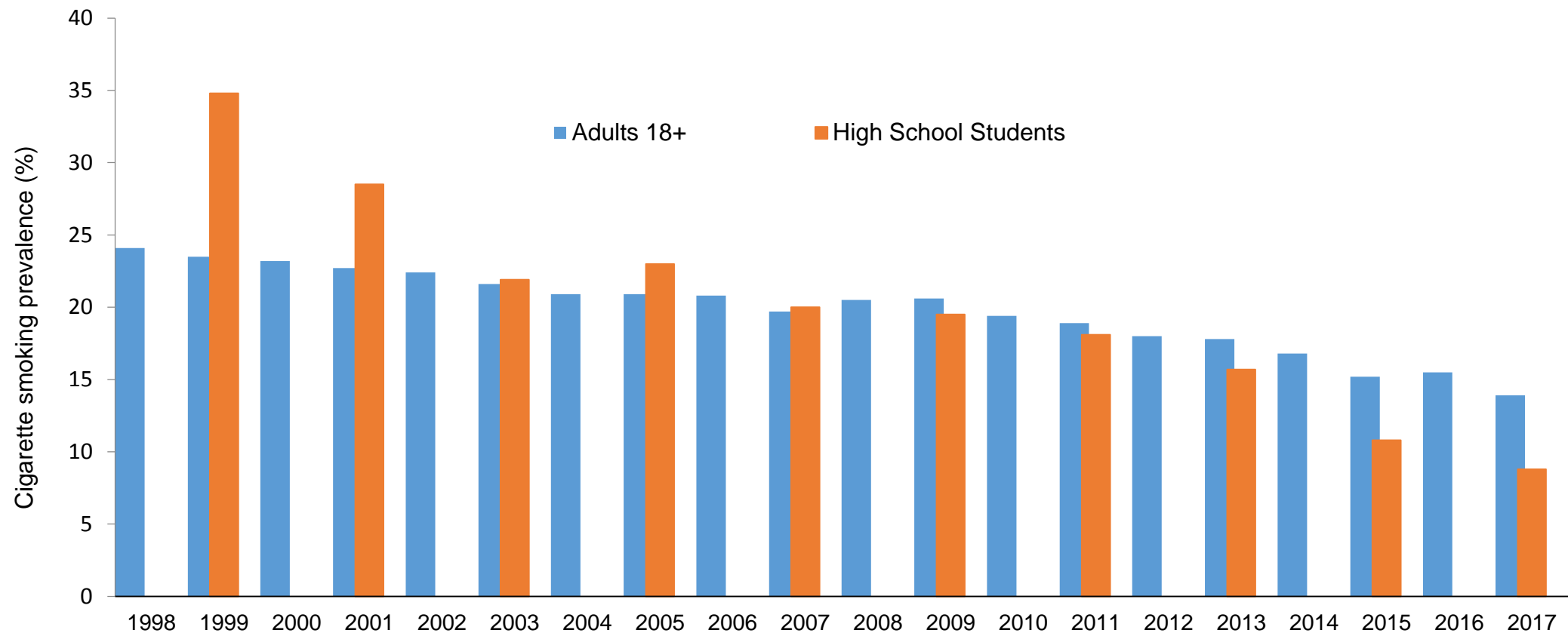


**Restrictions on  
Flavors**



**Alternative  
Pricing Policies**

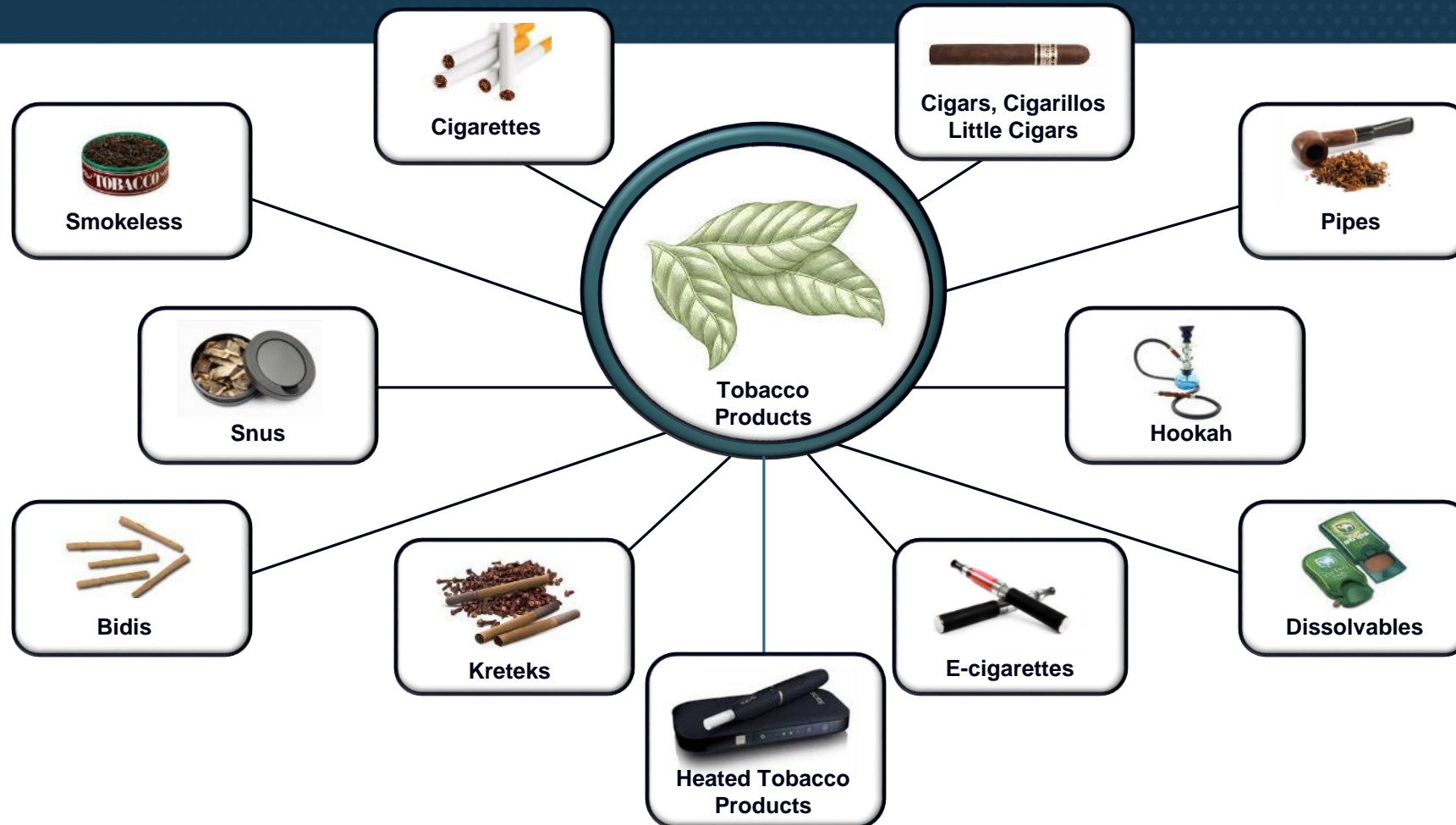
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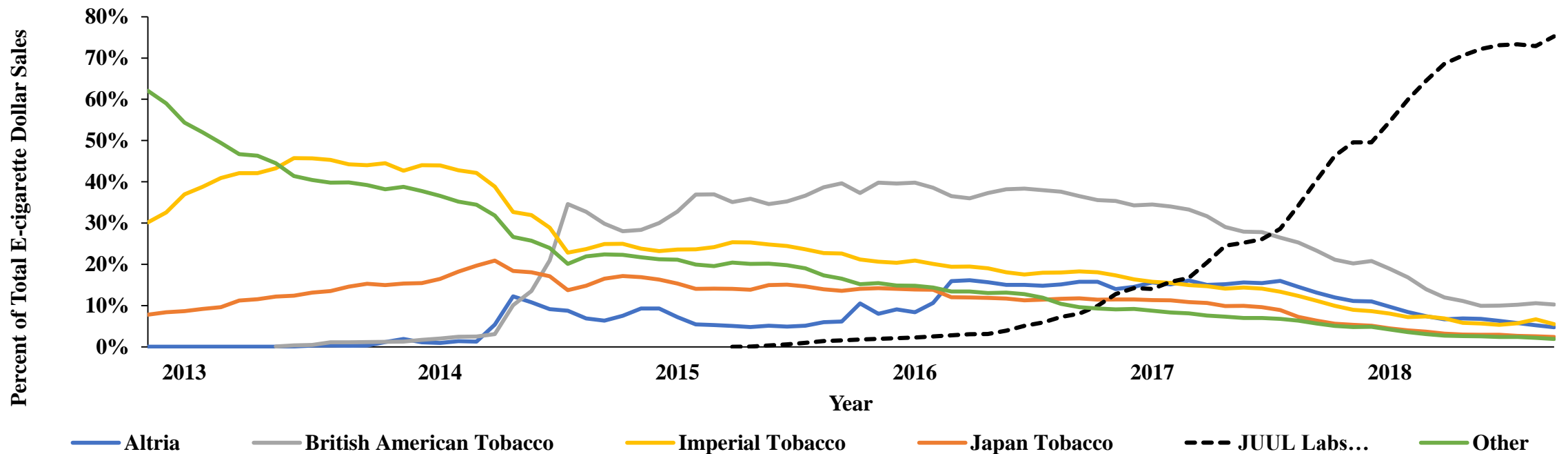
**Source:** Adult cigarette smoking prevalence data are from the National Health Interview Survey (NHIS).  
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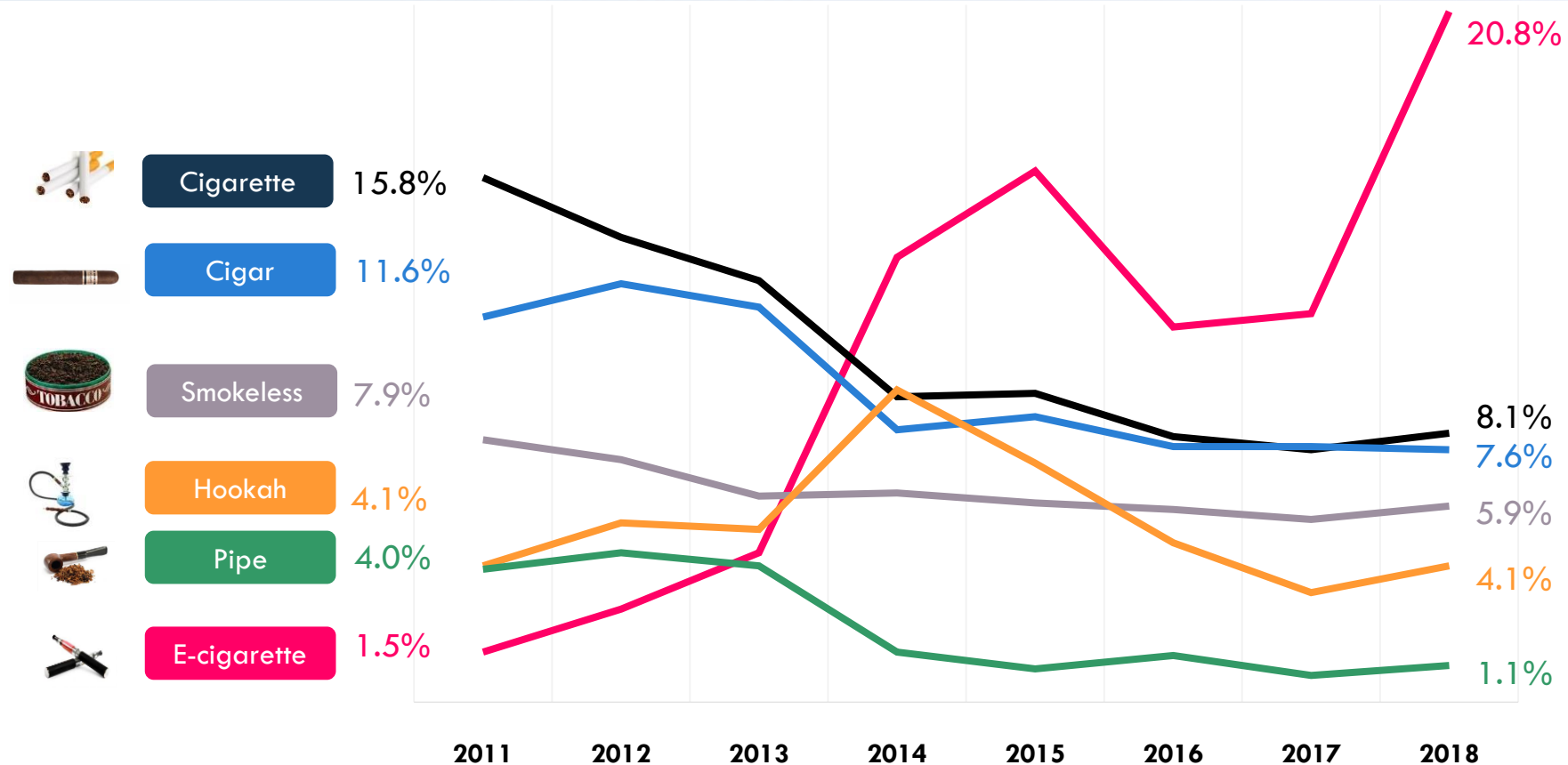


# E-CIGARETTE MARKET SHARE, BY DOLLAR SALES, UNITED STATES, 2013-2018



**Source:** King BA, Gammon DG, Coats EM, Marynak KL, Loomis BR, Rogers T. The Rise of the Pod Mod: Trends in E-cigarette Sales in the US, 2013-2017. Presented at: 25th Annual Meeting of the Society for Research on Nicotine and Tobacco; February 2019; San Francisco, CA.

# CURRENT TOBACCO PRODUCT USE AMONG U.S. HIGH SCHOOL STUDENTS – NYTS 2011-2018



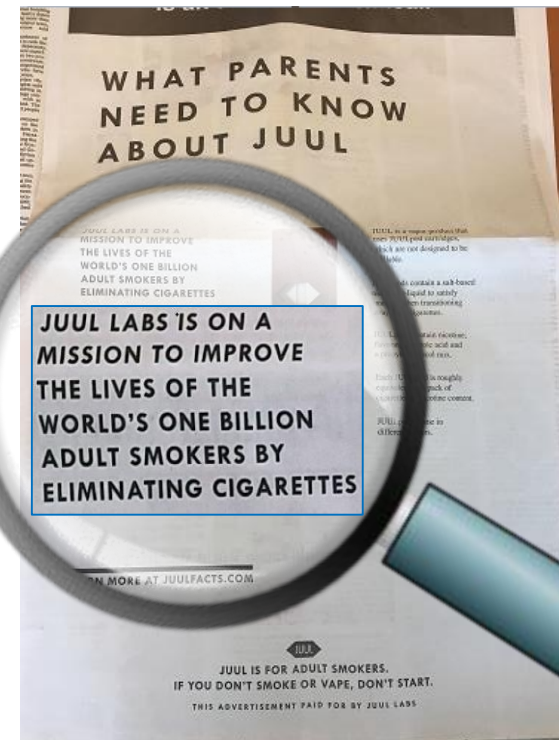
**Source:** Gentzke AS, Creamer M, Cullen KA, Ambrose BK, Willis G, Jamal A, King BA. Vital Signs: Tobacco Product Use Among Middle and High School Students — United States, 2011–2018. MMWR Morb Mortal Wkly Rep 2019; 68(6):1-8.

# EVOLUTION OF E-CIGARETTE MARKETING

"We don't think a lot about addiction here because we're not trying to design a cessation product at all...anything about health is not on our mind"

**JUUL R&D Engineer,  
quoted in *The Verge*,  
April 2015**

2015



2018

# WE ASKED: ARE ADULTS USING THESE PRODUCTS?

**OBJECTIVES:** Assess use and reasons for use of electronic vapor products shaped like USB flash drives among adults in the US

**DATA SOURCE:** *SummerStyles*, an internet survey of US adults aged  $\geq 18$  (N=4088) fielded in June-July 2018

**METHODS:** Respondents were shown product images and asked about ever use, current (past 30 days) use and reasons for use. Weighted point estimates and adjusted ORs were assessed.

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<sup>2</sup>Carter Consulting, Inc, Contractor to Office on Smoking and Health, Centers for Disease Control and Prevention, Atlanta, Georgia, USA

<sup>3</sup>Department of Health Services, School of Public Health, University of Washington, Seattle, Washington, USA

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## Brief report

### Use and reasons for use of electronic vapour products shaped like USB flash drives among a national sample of adults

Kristy L Marynak,<sup>1</sup> Fatma Romeh M Ali,<sup>1</sup> Gillian L Schauer,<sup>2,3</sup> Michael A Tynan,<sup>1</sup> Brian A King<sup>1</sup>

**ABSTRACT**

**Objectives** Assess use and reasons for use of electronic vapour products (EVPs) shaped like universal serial bus (USB) flash drives among adults in the USA.

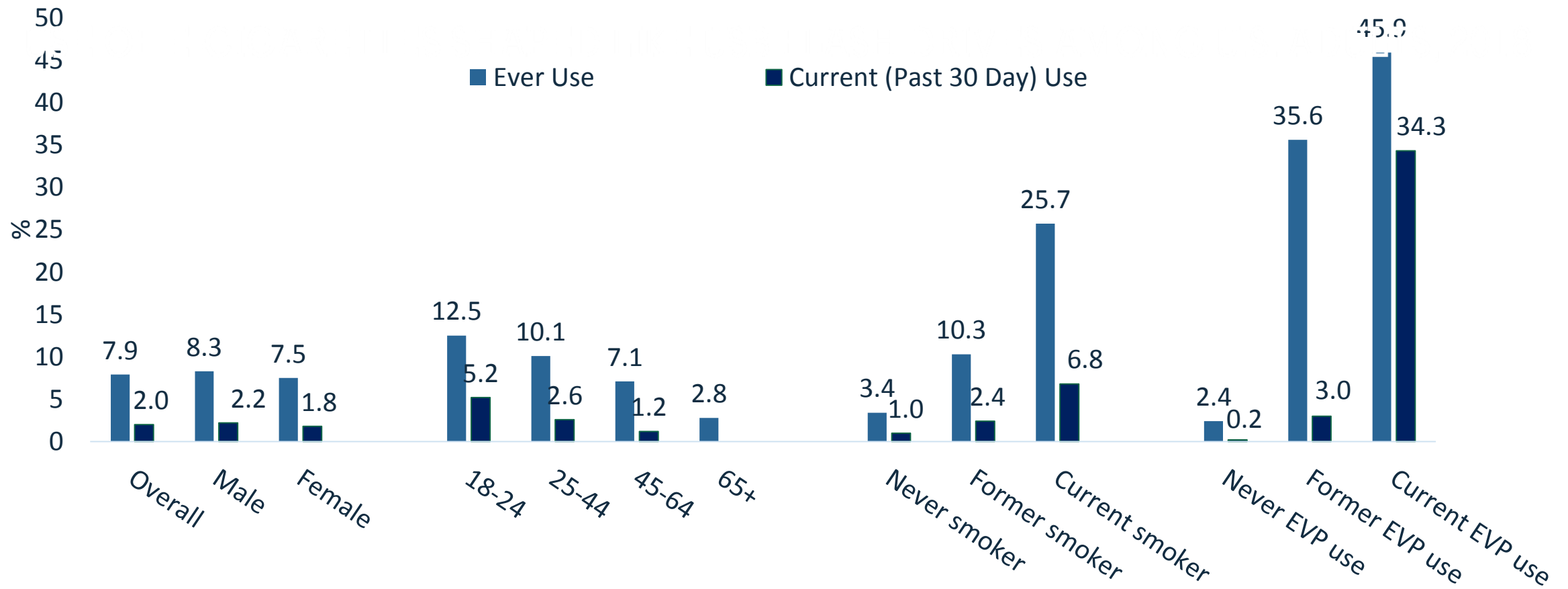
**Methods** Data came from *SummerStyles*, an internet survey of US adults aged  $\geq 18$  (N=4088) fielded in June to July 2018. Respondents were shown product images and asked about ever use, current (past 30 days) use and reasons for use. Weighted point estimates and adjusted ORs were assessed.

**Results** In 2018, 7.9% of participants had ever used flash drive-shaped EVPs, including 25.7% of current cigarette smokers and 45.9% of current EVP users. Moreover, 2.0% reported current use, including 6.8% of cigarette smokers and 34.3% of EVP users. Leading reasons for ever use were 'to deliver nicotine' (30.7%) and 'friend or family member used them' (30.2%).

the top-selling brand in the USA in December 2017.<sup>6</sup> In a national study, 9.5% of 15–17 year olds and 11.2% of 18–21 year olds reported ever use of JUUL in 2018, while 6.1% and 7.7% reported current use, respectively.<sup>7</sup>

JUUL sales in the USA increased 641% from 2016 to 2017, and as of October 2018, it held approximately 75% of US market share.<sup>6,8</sup> JUUL's popularity spurred the rapid introduction of lookalike products, including Altria's MarkTen Elite, Imperial Tobacco's myBlu and independent brands such as PHIX and SMOK.<sup>9</sup> JUUL and other flash drive-shaped e-cigarettes typically contain high levels of nicotine compared with other EVPs.<sup>9</sup> Additionally, some flash drive-shaped EVPs can be modified for marijuana use, or are marketed specifically for marijuana use (eg, Pax Era).<sup>9</sup>

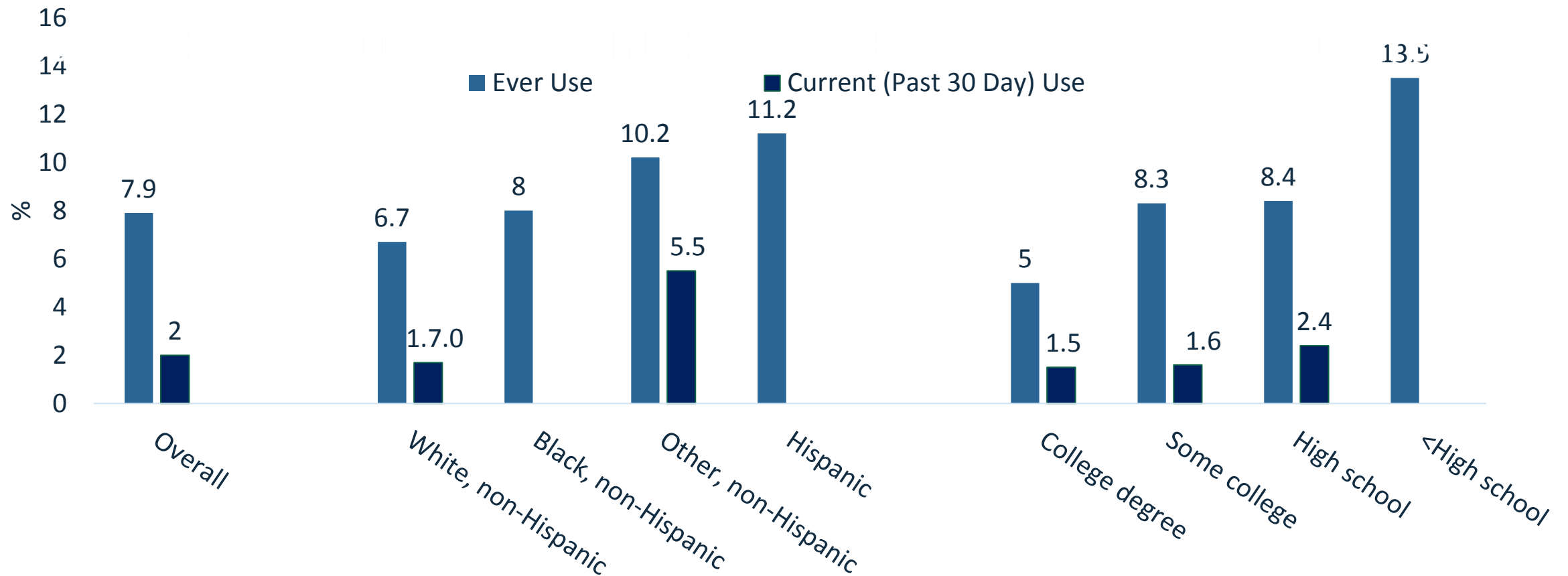
## RESULTS - USE OF E-CIGARETTES SHAPED LIKE USB FLASH DRIVES AMONG ADULTS US, 2018



Source: Marynak KL, Ali FRM, Schauer GL, et al. Use and reasons for use of electronic vapour products shaped like USB flash drives among a national sample of adults. *Tobacco Control*. Published Online First: 25 April 2019. doi: 10.1135/tobaccontrol-2019-054932.



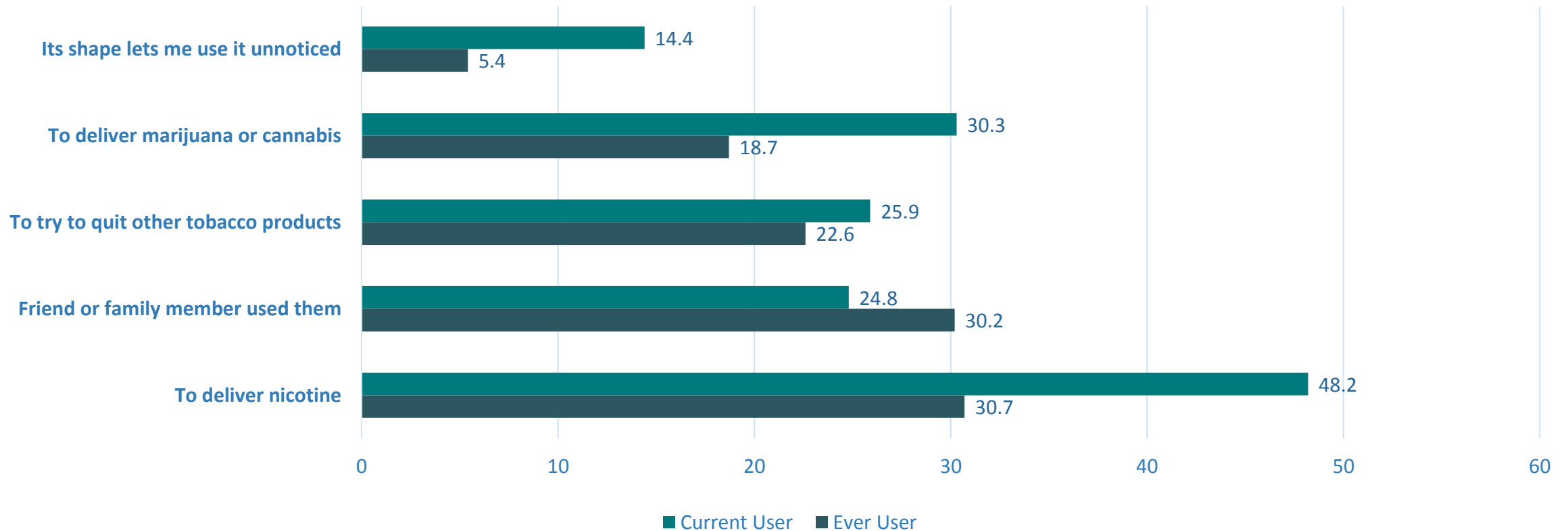
## RESULTS (CONTINUED) - USE OF E-CIGARETTES SHAPED LIKE USB FLASH DRIVES AMONG ADULTS IN THE US, 2018



NOTE: Black, non-Hispanic; Hispanic; and <high school results not shown for current use because small sample sizes resulted in unstable estimates.

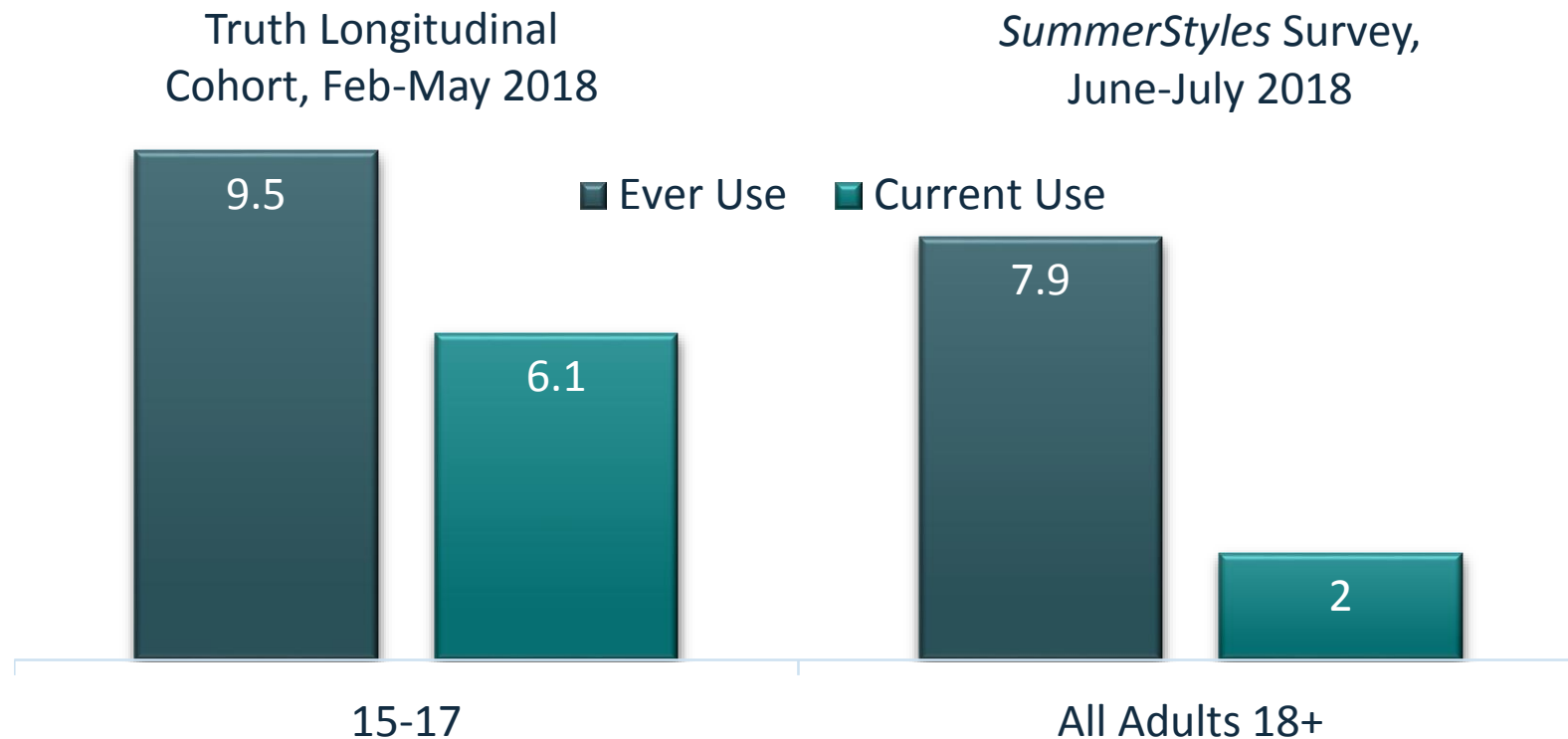


## RESULTS – REASONS FOR USE OF E-CIGARETTES SHAPED LIKE USB FLASH DRIVES AMONG ADULTS IN THE US, 2018



Source: Marynak KL, Ali FRM, Schauer GL, et al. Use and reasons for use of electronic vapour products shaped like USB flash drives among a national sample of adults. *Tobacco Control*. Published Online First: 25 April 2019. doi: 10.1135/tobaccontrol-2019-054932.

## FINDINGS IN CONTEXT: CURRENT USE OF JUUL IS AT LEAST THREEFOLD HIGHER AMONG ADOLESCENTS THAN ADULTS



**Note:** Adolescents were asked about JUUL only in the Truth Longitudinal Cohort study. Adults were asked about JUUL and other USB flash drive-shaped e-cigarettes in the *SummerStyles* survey.

**Sources:** Vallone DM, et al. Prevalence and correlates of JUUL use among a national sample of youth and young adults *Tobacco Control* Published Online First: 29 October 2018; Marynak KL, Ali FRM, Schauer GL, et al. Use and reasons for use of electronic vapour products shaped like USB flash drives among a national sample of adults. *Tobacco Control*. Published Online First: 25 April 2019. doi: 10.1135/tobaccontrol-2019-054932.

## KEY FINDINGS

- Few adults use JUUL and other USB-shaped e-cigarettes overall
- Use of JUUL is more than threefold higher among youth ages 15-17 (6.1%) than adults (2%)
- Nicotine delivery and peer or family member use are primary reasons for use
- Smoking cessation is not the predominant reason for use among adults
- Products are being used to deliver marijuana, revealing the diverse landscape of EVP product offerings and patterns of use

## PUBLIC HEALTH IMPLICATIONS

- Given that youth are more likely to report using JUUL than adults, efforts are warranted to prevent youth access to and use of flash-drive shaped e-cigarettes
- Efforts to prevent youth access can occur as we simultaneously assess these products' potential to help adult smokers quit.
- Surveillance systems need to account for use of electronic vapor products for nicotine and cannabis.
- Policies that prohibit e-cigarette use and smoking indoors can help prevent bystanders from exposure to secondhand tobacco product emissions.



## TAKEAWAYS

**1**

Cigarette smoking remains the leading cause of preventable disease, disability, and death in the United States.

**2**

The tobacco product landscape continues to diversify to include new and emerging products.

**3**

We know what works. But core tobacco control strategies have not been fully implemented throughout the US and have not reached all populations in all states.

**4**

It is critical that tobacco control strategies are modernized to keep pace with the changing tobacco product landscape.



# THANK YOU

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ACKNOWLEDGEMENTS: KRISTY MARYNAK, FATMA ROMEH M. ALI, GILLIAN SCHAUER, BRIAN KING



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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

